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10/718,348

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John C. Simmons

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John C. Simmons  
7993 Cavershamwood Ln.  
Germantown, TN 38138

EXAMINER
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MALAMUD, DEBORAH LESLIE

ART UNIT	PAPER NUMBER
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3766

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/718,348	<b>Applicant(s)</b> SIMMONS, JOHN C.	
	<b>Examiner</b> DEBORAH MALAMUD	<b>Art Unit</b> 3766	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 17 January 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) 7-9, 11, 12, 17-20, 24-27 and 30-34 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6, 10, 13-16, 18, 19, 21-23, 28 and 29 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

1. The examiner acknowledges the amendments received 17 January 2008. Claims 7-9, 11-12, 17-20, 24-27 and 30-34 are withdrawn; claims 1-6, 10, 13-16, 18-19, 21-23 and 28-29 are pending.

### ***Claim Rejections - 35 USC § 112***

2. In view of the amendments received 17 January 2008, the rejection of claim 15 under 35 USC 112, second paragraph is withdrawn.

### ***Claim Objections***

3. Claims 7-9, 11-12, 17-20, 24-27 and 30-34 are objected to because of the following informalities: the status modifiers of claims 7-9, 11-12, 17-20 and 24-27 indicate these claims as "currently amended." Nothing indicates the correct status of these claims as "withdrawn," due to a previous restriction requirement. Claims 30-34 are not mentioned at all in the amendments received 17 January 2008; these claims were also withdrawn due to a previous restriction requirement. Appropriate correction is required.

### ***Response to Arguments***

4. Applicant's arguments filed 17 January 2008 have been fully considered but they are not persuasive. As a preliminary matter, it is noted that the arguments themselves were unclear, since due to either a printing or faxing error, some of the words in the

"Remarks" section, and in the claim amendments themselves, are blurry and occasionally words are written on top of other words. The Examiner contacted the Applicant on 22 April 2008 in order to get a clearer copy sent in; the subsequent fax was no clearer. The Examiner suggests checking over the copy prior to sending it in. As a result, the Examiner has attempted to address the arguments as best perceived under the above-stated conditions.

5. The Applicant argues (page 1, "Remarks"), with regards to claim 1, "A. The beeper can be placed anywhere in the mouth. Location of the beeper has no relevance, spatial or otherwise. B. No "formation" of arrayed stimulation points exists. Knierim [previously cited reference] has a single buzzer/beeper. C. This "non-formation" is also in no way "conductive to "producing stimulations perceptible to the brain as a discernable point whose positions may be perceived in some spatial frame or reference relatable to an...external spatial environment. There are no external sensor means provided nor any suggestion that they...2) had some mechanism to sense an external spatial environment, it also provides no means to communicate this to its assembly, neither provides nor suggests any means to process a relevant (or any otherwise relevant) reaction and neither provides suggests any means to decide reactions to external conditions or to direct them. 3) All such "stimulations" are without any directional significance. 4) The stimulations (a buzzing noise from one place anywhere in the mouth) are not indicative of any directional magnitude, direction, speed or body attitude. 5) Nothing in Knierim's oral buzzing has any relationship to "some spatial frame or reference relatable to an actual environment" or to "a discernable point". 6) There is

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nothing in Knierim's oral buzzer's "actual (external) environment" that has any effect on anything Knierim does. Nothing in the buzzer sound is "perceptible to the brain as related to a discernable point whose positions may be perceived in some spatial frame or reference relatable to an actual environment" Knierim is a timer and magnet-proximity switched buzzer." As best understood by the Examiner, the Applicant is arguing features that are not positively claimed, or present in the claim at all. Amended claim 1 requires "stimulators placed in a formation conducive to providing stimulations perceptible" as one or more of a discernable point, points, shapes, or any combination of the former three choices. The Examiner notes that "conductive to" is not a positive limitation; any system or device that is capable of performing the claimed functions would satisfy this requirement. Certainly, Knierim's system, which produces a localized beeping sound from a device inside a user's mouth, in order to enforce a certain behavior (wearing an orthodontic headgear), is capable of providing (audible) stimulations perceivable by a user (and indeed those around him or her) as a discernable point whose position may be perceived as relatable to a spatial environment. If a user of Knierim's device forgets to wear the headpiece, the beeper or buzzer is loud enough, and close enough in proximity to the patient's ear, to be localized to a signal inside the user's mouth. For those around the user, it may not be possible to detect the signal as exactly as its location relative to the roof of the user's mouth or a single tooth, but it certainly is possible to locate the source of the noise as coming from the user's mouth.

6. The Applicant further argues (page 2, "Remarks"), with regard to the behavior controller of the claimed invention, "A. Knierim neither has nor could accommodate (if he had it) knowledge of or data regarding "graphically perceived points which are related in the mind to desired actions or spatial locations in the current environment". B. The term "'graphically perceived points", in the context of the specification and in typical graphical and spatial applications, refer to spatial arrays. These are typically Cartesian matrices (ex: rows and columns) but can also be represented by polar coordinates (which are point-for-point identical to their Cartesian counterparts). What the term does not refer to is a single point such as a buzzer that is placed in no particular location. C. Nothing about the "'graphically perceived points" (which is actually only the one singular location of the oral buzzer located just about anywhere in the mouth) is "related in the mind to desired actions spatial locations". D. Knierim's beeper is intended to be not an indicator of spatial positional relevance but simply "'sufficiently irritating and, perhaps, embarrassing to causes the patient to prefer wearing the headgear over hearing a beeper inside his mouth". (Knierim Col. 2 line 25-28) E. There are no "actions" to be directed relative to positions "perceived in some spatial frame". There is only one action, i.e. put on the headgear. It is not related to any spatial reference. Knierim is a timer and proximity switched buzzer." The Examiner notes that the features the Applicant relies upon for the argument are part of a "whereby" clause. "Whereby" clauses are meant to add breadth and meaning to a claim, but are not considered as necessarily limiting. The Examiner explained how aspects of Knierim's system are considered to be capable

of performing the claimed requirements, in the previous Non-Final Office Action, and below.

7. With regards to the battery power source of Knierim, the Applicant has not specifically addressed how the invention defines over Knierim, only reiterating that the electronic components in Knierim are used for different purposes than the invention as claimed. While the Examiner disagrees with this assessment, for reasons stated above and in the previous Non-Final Office Action, it is noted that as long as Knierim's system is capable of performing the claimed function and nothing prevents it from doing so, then Knierim's system satisfies the claimed requirements.

8. Regarding claims 2-3, the Applicant argues (page 3, "Remarks") "A. This un-attenuated (fixed electromagnetic field) permanent magnet and uncharged, passive coil is not a "wireless means of data communication" by any communications standard of wireless communications either in terms of a data- driven electromagnetic induction (modulation) process in the "sender" or in the ability to demodulate data-driven attenuation patterns at a receiving end. B. The un-attenuated magnet and completely passive coil couldn't even be equated to a telegraph means which can at least send and receive a character set. C. The suggested "communication means" has neither the means for creating 2 way communications nor for making use of such if it were somehow added on later. D. You don't "communicate" with a magnet. The magnet has no data reception means (and, of course, no parsing or interpreting means). E. The magnet is neither a sensor nor a logic controlled sender. It is neither end of a "communications means". F. The receiving end of the suggested "communication

means" is defined by Knierim as "a magnetic switch" (Knierim column 4, line 41-42) not as a receiver (and certainly not as a sending unit). G. The inductive current rise that is "communicated" has nothing to do with spatial positions, directions, velocities, or anything resembling data beyond the "up" condition of an off-the-shelf proximity switch. H. The un-attenuated magnet and completely passive coil is, in fact, simply a common proximity switch; not to be confused with a data communication system. I. The fact that a timer may ultimately trump the proximity switch's "up" position is irrelevant because the function that the switch in question performs is still only that of the common magnetic off/on switch. J. Like the earlier example of equating a bicycle with the means and embodiments of a jet airplane (somehow equating the two by simply calling them both "vehicles"), the temporal induction of a current around a passive, un-encodable coil nearing a completely un-attenuated magnet might be called "wireless communications" using extremely indistinct nomenclature." The Examiner notes that a communication device as claimed by the Applicant merely has to be capable of communicating information between the components of the system. Knierim's system certainly does this, since the headgear's presence halts the beeping or buzzing noise of the oral device.

9. Regarding claim 6, the Applicant argues "(page 4, "Remarks") "Knierim states (column 4, lines 36-45) that "When the bow 16 and prongs 18 are positioned as shown in FIG. 1, a headstrap 26 extends around and behind the patient's head and places tension on the bow 16 to place a force on teeth 21 and, in this position, the bow 16 will place the magnet 14 in close proximity to the mouthpiece 12. The mouthpiece 12



includes a magnetic switch 27, a logic circuit 28, a battery 30 and a beeper speaker 32, all encapsulated within a plastic material such as methyl methacrylate that is commonly used in the field of orthodontics for appliances supported within the mouth of a patient. Preferably, the mouthpiece 12 is specially constructed in the lab to fit within a particular patient's mouth." Thus: A. The speaker/buzzer is not only fixed at a single location, but that location is also buried, literally molded "within a plastic material such as methyl methacrylate"). B. That speaker location is both static and insulated from any electronic stimulation to the wearer and any specific positional vibration communication to the wearer by the surrounding molded methyl methacrylate. C. The speaker or buzzer, when the proximity switch and timer close the circuit, create a buzzing that has no data significance except the lack of proximity. D. The user is unaware of any directionality responsive to the speaker location. E. Knierim's system is equally ignorant of any directionality. It has no data to provide the user of directionality. F. It also has no means to do anything with directional data even if it had some (see above notes regarding the static, mold-encapsulated and insulated nature of the buzzer). G. Further, Knierim's system is adequate only for recognizing proximity, not direction. H. The headgear's magnet and the worn coil will induce a similar current even if the headgear is imperfectly centered. Thus, even if Knierim's system had the capacity to deal with directional data, which it does not, the directional data would be inaccurate. Engineers note: It would be theoretically possible for headgear position (not really direction) data more accurate than Knierim is capable of to be integrated between two distance-separated magnets of precisely known position, field range and strength. However, it would be difficult to

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execute with precision in mouths of consistently non-standard shapes and sizes and in constantly moving and growing teenage mouths, the data so captured have nothing to do with the goals or claims of Knierim and, of course, Knierim didn't teach any of this. I. To Knierim's credit, in light of the ineffectiveness described above, Knierim teaches nothing regarding directional cognizance of anything at all, only the general proximity of a magnet to a near coil. J. Knierim clearly teaches that the purpose of the un-attenuated magnet and the passive "switch" is to, given adequate proximity, simply close the circuit on the "magnetic switch" (column 3, lines 1-4)." Again, the Applicant is arguing features which are not positively claimed or defined over the art of record. Claim 6 merely requires "the location of a stimulation from a stimulator indicates a direction." This "direction" could be an instruction such as a reminder to put the headgear on. This "direction" could also be a North/South, left/right, x/y or inside mouth/outside head or mouth. The word "direction" in this context is ambiguous, and is satisfied by Knierim's system, which indicates a directionality of a signal relative to a patient's head or mouth.

10. Regarding claim 14, the Applicant argues (page 5, "Remarks") " Claim 14 states: "The device of claim 1 further comprising: a first sensor means operatively connected to behavior controller means for sensing the direction, or attitudes, or speed, or any combination thereof, of the body; whereby behavior controller means can monitor and automatically respond to any instruction not followed, or reward an instruction that was followed, or any combination thereof." The magnet sensor disclosed by Knierim is neither taught to sense any of the above (even less any combination thereof) nor

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embodied has a form capable of the effective execution of any of them. B. Knierim's magnet and coil are not "for sensing the direction of the body". They have no idea what the body's current net vector of direction is nor are they capable of it. The 3 dimensional (x1,y1,z1) base point (base of directional vector) and three dimensional (x2, y2, z2) end point indicative of a "direction of the body" cannot be captured by the distance between a magnet and a coil (neither of which have anything to do with body direction). C. The specification specifically indicates what is meant by "direction of the body" and it is not the distance between 2 elements in the mouth. D. The use of the word "means" in "first sensor means" directs the interpretation of the sensor's characteristics, functionality and purpose to those indicated in the specification of the current invention which are completely foreign to Knierim's proximity switch. The specification's discussion of means "for sensing the direction of the body" clearly have nothing to do with a proximity switch and much to do with the world outside the mouth (e.g. GPS [0031], distance sensors [0054] and attitude and direction sensors [0083]). Knierim's magnet and coil are not the specification's "sensor means ....for sensing the direction of the body". E. Threshold proximity switches as described by Knierim cannot even gauge the irrelevant distance between the magnet and the coil (which will normally be different for each customized mouth). Knierim teaches the involvement of an orthodontist to accommodate/customize around the infinite varieties in oral architecture and personalized setup and the distance between the magnet and coil will be within a tolerance driven by the threshold attenuation (which is a function of the standard magnet and the maximum tolerated distance to the coil). Not only is there no

mechanical means in Knierim for reading the current and calculating the distance, that distance, even if it could be calculated by the not-present calculation means, would be irrelevant to the task of "sensing the direction of the body". F. Further, as covered in previous sections above (and included by reference but not repeated here to reduce by pages the length of this response), the magnet sensor would have no capacity to deal with direction data even if it had any - it is a proximity sensor with no means for finding the data, no method for communicating it, and nothing to do with the data should it arrive at the "controller". G. The "magnet sensor" (described in ubiquitous references in the specification and claims) is exactly what Knierim called it: a "magnetic switch". I.e. an on-off, open or closed circuit indicative only of a threshold of proximity and both ignorant of and incapable of communicating directional data." Again, the Examiner notes that the features upon which the Applicant relies are part of a "whereby" clause. Knierim's device satisfies the amended claim requirements of a sensor means operatively connected to the behavior controller for sensing the direction of the body, i.e., the position of the head in relation to the headgear.

11. With regards to claim 28, the Applicant argues (page 6, "Remarks") "Applicant agrees that the cessation of a nagging buzz could be a positive reinforcement. However this is not a "stimulation that will be perceived as positive to the body" but the cessation of one that is negative. Also, what it signals is neither spatial nor precise enough to be of any value in directing a body to perform spatially which is the context of both specification and claims." Again, the Examiner notes that the features upon which the Applicant relies are part of a "whereby" clause. Knierim's device satisfies the amended

claim requirements of a stimulator that has or includes a positive reinforcement component, since it is capable of performing positive reinforcement and nothing in its structure prevents it from doing so.

12. With regards to the rejection of claim 1 under Levine (previously cited reference), the Applicant argues (pages 7-8, "Remarks") "A. The potentially singular electrode of Levine is not "in a formation conducive to providing stimulations perceptible to the brain as a discernable point, or points, or shapes, or any combination thereof". It is not a formation of anything. It is simply an isolated electrode with no particular locational significance isotropically dishing out electricity on command from the "central processor". B. Levine does not provide user-level spatial directions that would be dependent on the ability to provide "stimulations perceptible to the brain as a discernable point". Although an understatement, this is analogous to replacing a compass with a light that comes on when you do bad (including wandering "out of bounds"). Rather than directing you x degrees to the right for a specific period to go around an obstacle and then y degrees left, Levine only "stimulates you" when you're "out of bounds". C. Levine does not provide or teach any means for knowing the azimuthal orientation of the wearer (radio waves are isotropic and pass through the wearer's body). Thus, it is inadequate for providing a "spatial frame of reference relatable to an actual environment". Levine can't even give crude directions like "go a little to the left" much less provide anything "perceived in some spatial frame of reference relatable to an actual environment" that would allow the intuitive spatial

perception applicable to gradient direction. D. Levine has no ability to resolve to anything resembling a "discernable point". Levine's worn assembly has no distance sensor whatever and, in fact, depends on time-difference-of-arrival and/or triangulation of radio waves from a remote location. This information, even when the radio waves are not attenuated by incident microwave corridors, path extended by indirect paths between tall and adjacent building rows, is already too low in precision to provide (even if wearer azimuth were known which it isn't) gradient directional information to the user to navigate around objects whose size are below the Modulation Transfer Function (MTF) limited effective precision of the time-difference placement system. In other words, Levine neither teaches nor provides a means capable of anything resembling any "discernable point" that might provide a spatial basis for real-time spatial guidance around the obstacles of the wearer's environment. E. It is also neither the purpose of Levine or a teaching of Levine that a point would ever be identified. Levine is an "out-of-bounds" alarm with no spatial direction capacity designed or delivered. F. Points in the wearer's environment are not made "perceptible to the brain as a discernable point, or points, or shapes, or any combination thereof whose positions may be perceived or learned to be perceived in some spatial frame of reference relatable to an actual environment". There is nothing graphical about Levine at any level. No perception of directions overlaid over an "actual environment" are possible. The wearer needs to find his own way back "in bounds". Because of all of the above, and, in particular, the complete lack of elements needed for communicating a spatial or graphical perception of perceived points in the current environment, "the behavior controller means" cannot

"direct an action with instructions that include directions whose intent will be recognized intuitively due to graphically perceived points which are related in the mind to desired actions or spatial locations in the current environment." As best understood by the Examiner, the Applicant is arguing features that are not positively claimed, or present in the claim at all. Amended claim 1 requires "stimulators placed in a formation conducive to providing stimulations perceptible" as one or more of a discernable point, points, shapes, or any combination of the former three choices. The Examiner notes that "conductive to" is not a positive limitation; any system or device that is capable of performing the claimed functions would satisfy this requirement. Certainly, Levine's system for providing an electric shock to the abdomen of the user provides a discernable point of stimulation, as relatable to a spatial environment (the abdomen of the user). The user will gain a sense of the boundaries in which he or she should remain in order to avoid electric shocks, based on where the user is when he or she receives these electric shocks. This provides a very clear spatial understanding of the stimulations received. The Applicant is also again relying on features that are included in a "whereby" clause.

13. Regarding claim 10, the Applicant argues (page 8, "Remarks") that some of the exact wording of the claims are not found "anywhere in either the specification or claims [of Levine]. The word "stimulation" does occur but only once (col. 11 line 61) and then very specifically identifying one and only one purpose: "to discourage the subject from using such substance" which is completely unrelated to navigational direction." Where the specific wording of the Levine reference diverges from that of the claims, the

Examiner has attempted to make it clear which passages of Levine are industry equivalents of the claim elements. If the Applicant has a specific question about which elements correspond to Levine, these should be pointed out individually. It is noted that, though the wording may differ, the elements as disclosed by Levine are still capable of performing the claimed functions, and nothing in their structure prevents them from so doing.

14. Regarding claim 22, the Applicant argues (page 8, "Remarks") "This wording creates a straw man which would seem to disqualify anything with a GPS location transmission to a host. Even claim 22 is a subclaim of a subclaim, applicant respectfully takes issue to submit that claim 22 doesn't simply list such. Instead claim 22 differentiates the intent and design by indicating that this is part of the primary structure for allowing the system to "...manage the behavior of the body being directed with respect to a map, or a path, or a direction, or an area on the map, or any combination thereof by comparing the actual GPS position with a desired position and directing the body accordingly." Further, Levine has no directional control in excess of that of an "invisible dog fence" which simply penalizes the breach of a perimeter." The Applicant has failed to state how exactly the GPS of Levine differs from the GPS of the invention. The Examiner maintains that a GPS for locating a patient via a central server is equivalent to GPS means operatively connected through the data transmitter to the remote controller; furthermore the limitations argued by the Applicant are part of a "whereby" clause.



15. Regarding claim 23, the Applicant argues (page 8, "Remarks") "Claim 23 uses video to "...direct the body by sending stimulation instructions to the behavior controller". Levine has no navigational functions or aspirations but only uses the camera to, optionally "if necessary" watch for misbehavior such as "vandalism or deliberate destruction". Further these cameras are neither dedicated to or designed for body positioning or navigation - particularly when "scanning the surrounding area" and not the body-position registered foreground image. Again, the limitations argued by the Applicant are part of a "whereby" clause.

16. Regarding the rejection of claim 1 under Watson (previously cited reference), the Applicant argues (page 9, "Remarks") "Watson's barking collar is blind to any and all positions, discernable points, or any spatial reference frames. If the dog barks or makes a bad noise, he hears a sound that has nothing to do with positions or physical or dimensional frames of references of any kind. An "interval of time" determines the bad behavior (too often is bad) and delays or eliminates responses based on time intervals and sounds. This device does not teach, anticipate or have the any of the capacities required to effect any "discernable points" that would be perceived as anything resembling spatial directional cues." As best understood by the Examiner, the Applicant is arguing features that are not positively claimed, or present in the claim at all. Amended claim 1 requires "stimulators placed in a formation conducive to providing stimulations perceptible" as one or more of a discernable point, points, shapes, or any combination of the former three choices. The Examiner notes that "conductive to" is not

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a positive limitation; any system or device that is capable of performing the claimed functions would satisfy this requirement. Certainly Watson's system of rewarding the animal, through a pleasurable scent or image on a screen, has a spatial component to the stimulation. The image is projected in a point in space, focusing the animal's attention to that point; a similar case can be made for a scent that is released via aerosol in a specific direction, towards the animal. Furthermore, many of the limitations argued by the Applicant are directed to a "whereby" clause.

17. Regarding claims 28-29, the Applicant states (page 9, "Remarks") "Applicant agrees that animals such as dogs can smell scents including pheromones and that these smells, like sights and sounds, can be exciting. However, Watson can do nothing but spray in a timing-incompetent and non-sensical (from a spatial direction- encoding perspective) direction in response to a dog not barking-for a-long enough period of time. This response capacity is not in any way real-time capable - in fact its design specifically precludes such a capability. The timer might have another 10 minutes before deciding that the dog has been good enough for a thrill - which may put the response fully minutes after the needed "direction". Watson neither anticipates nor teaches the use of smells, etc, responsive to an immediate or instant situation, such a claim inappropriate in a system where behavior and response is graded by a how many actions (all of them bad by definition) occurred over a summed period of time adequate for multiple bad behaviors to be summed. Also, Watson's perfume spraying dog collar (Watson does not anticipate pheromones) does not have the physical capacity to recognize spatial body attitudes, the capacity to understand what to do with them if it

did, and it does not have the ability to direct the body to directionally specific actions.” Again, these limitations are part of a "whereby" clause. As to the claimed requirement of "positive stimulations are made to erogenous zones," the claim does not specify when this positive reinforcement is supplied, or for what strategy (for example, a fixed- or variable-ratio schedule). The claim merely requires a means that is capable of positive stimulations made to erogenous zones, which Watson's aerosol scent distributing means is clearly capable of performing.

18. The rejection of the claims is therefore maintained.

### ***Claim Rejections - 35 USC § 102***

19. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

20. Claims 1-6, 14, 18 and 28 are rejected under 35 U.S.C. 102(b) as being anticipated by Knierim (U.S. 7,764,111). Regarding claims 1, 4-5 and 18, Knierim discloses (col. 1, lines 55-68; Figure 1) “an orthodontic reminder and enforcer apparatus is provided for an orthodontic headgear. The headgear includes a conventional head strap with a modified face bow. The bow extends about the face and into the patient's mouth where it is attached to the teeth, and a magnet is preferably mounted on the front center of the bow. A mouthpiece is configured to fit within the mouth of the patient and is usually placed behind the front teeth. The mouthpiece includes a magnetic switch

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sealed within it and, when the face bow is in proper position on the teeth, the magnet on the face bow will be sufficiently close to actuate the magnetic switch in the mouthpiece.” During a use period for the headpiece (col. 2, lines 7-28) “the logic circuit will generate an electric alarm signal if the magnetic switch is not actuated by the magnet. If the magnetic switch is actuated, the logic circuit interprets this condition as a detection signal indicating the presence of the magnet and the face bow, and it will cease generating the electric alarm signal. During the dormant period, the patient is not required to wear the headgear so the logic circuit will not generate the electric alarm signal regardless of whether the magnetic switch is actuated. An alarm, preferably a beeper, is mounted within the mouthpiece and generates a beep inside the patient's mouth in response to the electric alarm signal. During the use period when the magnetic switch is not actuated, the beeper will continue to beep for a sufficiently long time to irritate the patient and force him to wear the headgear. In other words, in order to turn off the beeper inside his mouth, the patient must wear the headgear. The beeping sound inside the patient's mouth is intended to be sufficiently irritating and, perhaps, embarrassing [*sic*], to cause the patient to prefer wearing the headgear over hearing a beeper inside his mouth.” The examiner considers this to be stimulation means placed in a formation conducive to providing stimulations perceptible to the brain as a discernable point whose positions may be perceived in some spatial frame or reference relatable to an actual environment with the stimulators being physically located on a part of the body (the mouth) with adequate sensitivity to the stimulations; a behavior controller means operatively connected to the stimulations means for directing

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stimulations. The behavior controller means direct an action with instructions that include directions whose intent will be recognized intuitively due to graphically perceived points which are related in the mind to desired actions or spatial locations in the current environment. Knierim further discloses, (col. 4, lines 64-67) “Both the beeper speaker (32) and the logic circuit (28) are powered by a battery (30) which is also encapsulated within the mouthpiece (12).” The examiner considers this to be a power means for the provision of power where needed to the controller means.

21. Regarding claims 2-3, the examiner considers the magnetic communication between the mouthpiece (12) and the orthodontic headgear to be a communication means for communicating between the behavior controller and an external entity (the headgear), wherein the communication means is a practical wireless means of data communication.

22. Regarding claim 6, the examiner considers the beeping alarm of Knierim to indicate a direction of the headgear relative to the user’s head or mouth.

23. Regarding claim 14, the examiner considers the magnet sensor disclosed by Knierim to be a first sensor means operatively connected to behavior controller means for sensing the direction of the body, whereby the behavior controller means can monitor and automatically respond to any instruction not followed.

24. Regarding claim 28, the examiner considers the termination of the alarm beeping sound to be a positive reinforcement component, for encouraging the positive behavior of wearing an orthodontic device.

25. Claims 1, 10, 19 and 21-23 are rejected under 35 U.S.C. 102(b) as being anticipated by Levine (U.S. 6,334,073). Regarding claims 1, 19 and 21, Levine discloses (col. 11, lines 52-67) an “electrical stimulator (27) will activate the stimulating electrode (30) for a predetermined period of time when the command (20) from the central processor (4) is received and demodulated by the internal radio receiver (19) and is determined by the behavior control unit (25), preferably by the microprocessor (28), to be meant for the subject by examining the unique human identification code that encoded the command. The central processor will issue an activating command when its monitoring system determines the subject is out-of-bounds as described above in the first embodiment, or is using an unauthorized substance as described above in the second embodiment, and will periodically continue to reissue an activating command until the subject returns to his authorized area. The stimulator will also provide an adverse reaction each time an unauthorized substance is used, with the objective being to discourage the subject from using such substances. The stimulation voltage can be increased if the subject continues to violate the imposed restrictions, or is decreased upon compliance.” The examiner considers this to be stimulation means placed in a formation conducive to providing stimulations perceptible to the brain as a discernable point whose positions may be perceived in some spatial frame or reference relatable to an actual environment with the stimulators being physically located on a part of the body with adequate sensitivity to the stimulations; a behavior controller means operatively connected to the stimulations means for directing stimulations. The behavior controller means direct an action with instructions that include directions whose intent will be

recognized intuitively due to graphically perceived points which are related in the mind to desired actions or spatial locations in the current environment.

26. Regarding claim 10, the system of Levine discloses a series of points indicating by the stimulation means that create the perception of a line that indicate a distance to be achieved, since a user of Levine's system will be confined to a limited physical space due to electrical stimulation.

27. Regarding claim 22, Levine discloses (col. 8, lines 15-20) "the locations of each of the external radio receivers (3) must be accurately known by the central processor for precise location determination of the subjects. This can be accomplished, for example, by traditional surveying or by using the Global Positioning System." The examiner considers this to be GPS means operatively connected through data transmission means to remote control means.

28. Regarding claim 23, Levine discloses (col. 8, lines 40-43) "if necessary, the external radio receivers can be protected from vandalism or deliberate destruction by closed circuit television cameras capable of scanning the surrounding area and sending video back to the central processor." The examiner considers this to be video image capture means operatively connected to remote control means through data transmission means for capturing the image from a perspective of the body.

29. Claims 1, 15-16 and 28-29 are rejected under 35 U.S.C. 102(b) as being anticipated by Watson et al (U.S. 6,273,027). Regarding claims 1, 15-16 and 28, Watson discloses (col. 10, lines 59-67; col. 11, lines 1-22; Figure 5) a training device

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comprising a “a collar (54) which is adapted to be worn by the animal. The collar defines the reservoir (14), which is adapted to contain an aerosol containing a scent appealing to the animal to be released in the form of a spray. A filling valve (not shown) is connected with the reservoir, for receiving a canister (56) containing a supply of the aerosol, to fill the reservoir with the aerosol.” A microphone (26) is “connected to the PCB (printed circuit board; 28), for detecting the undesired behavior. The signal generator (27) is connected to the PCB (24), for generating RM signals, and the speaker (28) is connected to the PCB (28), for emitting RM (response marker) signals when an undesired behavior such as barking and the like is detected. The PCB (24) has programmed an interval of time. In operation, upon detection of an inappropriate barking through the microphone, the PCB (24) sends a RM signal through the speaker for the animal to hear, the solenoid valve (58) remains inactivated and closed such that no reward is provided to the animal, and the interval of time is reset to zero. If the animal does not bark during the full interval of time, the PCB (24) activates the solenoid valve (58), which opens to release from the reservoir a dose of aerosol containing the scent which is pleasing to the animal. The device also comprises a manual override for a direct remote control of rewards, RM and RAM signals dispensing, for optional teaching when the caretaker is present.” The examiner considers this to be stimulation means placed in a formation conducive to providing stimulations perceptible to the brain as a discernable point whose positions may be perceived in some spatial frame or reference relatable to an actual environment with the stimulators being physically located on a part of the body with adequate sensitivity to the stimulations; a behavior



controller means operatively connected to the stimulations means for directing stimulations. The behavior controller means direct an action with instructions that include directions whose intent will be recognized intuitively due to graphically perceived points which are related in the mind to desired actions or spatial locations in the current environment. The examiner further considers the microphone to be a sensor means operatively connected to behavior controller means for sensing sounds. It is to be noted that, being located on the collar of the animal, the sensor will be proximate to the mouth.

30. Regarding claims 28-29, the examiner considers the system of Watson to provide positive reinforcement to the animal being trained. It is to be noted that the nose is capable of sensing the presence of pheromones, which sexually stimulate a living being. An animal such as a dog is especially attuned to scents, such as pheromones or other pleasurable odors. Therefore, the examiner considers Watson's system to provide positive stimulations to an erogenous zone.

### ***Claim Rejections - 35 USC § 103***

31. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

32. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Knierim (U.S. 7,764,111). The Examiner considers the mouth piece (12) of Knierim to be arrayed in a roughly semi-circular area. Knierim discloses the claimed invention except

for a plurality of stimulators. It would have been obvious to one of ordinary skill in the art at the time of the invention to provide a plurality of stimulators, since it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8. See MPEP § 2144.04.

### ***Conclusion***

33. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

34. Any inquiry concerning this communication or earlier communications from the examiner should be directed to DEBORAH MALAMUD whose telephone number is (571)272-2106. The examiner can normally be reached on Monday-Friday, 9.00am-5.30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carl Layno can be reached on (571) 272-4949. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Carl H. Layno/  
Supervisory Patent Examiner, Art Unit 3766

/Deborah L. Malamud/  
Examiner, Art Unit 3766